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| 09/735,401      | 12/12/2000  | Eckhard Alt          | IFD/046             | 4641             |

490 7590 10/09/2003

VIDAS, ARRETT & STEINKRAUS, P.A.  
6109 BLUE CIRCLE DRIVE  
SUITE 2000  
MINNETONKA, MN 55343-9185

EXAMINER

THALER, MICHAEL H

ART UNIT PAPER NUMBER

3731

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/735,401

Applicant(s)

ALT, ECKHARD

Examiner

Michael Thaler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 61,64,65 and 68-84 is/are pending in the application.
- 4a) Of the above claim(s) 83 and 84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 61,64,65 and 68-82 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____.                                   |

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Claims 83 and 84 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claims 61, 64, 65, 68-71 and 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontaine (5,370,683) in view of Alfidi et al. (3,868,956). Fontaine, in figures 10-12, shows a stent having a wall with a multiplicity of holes formed therethrough, the tubular wall defined by a plurality of struts, the interconnections between the struts being of the same material as the struts (in the embodiment in which the connecting portions of the filament are formed from a single piece of material as described in col. 6, lines 22-27). Fontaine shows the cross-section of the struts as circular rather than oval. However, Alfidi et al. teach that the cross-section of stent struts may be oval (figure 13D) rather than circular (figure 13 C) in order to maximize the area of contact between the stent and the wall of the vessel (col. 8, lines 13-18). It would have been obvious to make the cross-section of the Fontaine struts oval rather than circular so that it too would have this advantage. The language "the holes having been formed by removal of material from the wall" in claim 61, line 3 involves a product by process limitation. However, the determination of patentability is based upon the product itself

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rather than the method of manufacturing the product. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (M.P.E.P. 2113). In this case, the product in is the same as or obvious from a product of the prior art. As to claims 69 and 76, Fontaine discloses a plurality of serpentine bands (each of the windings of the helical coil), each of the bands being a continuous structure (since they are formed of a single piece of material) and a closed structure (Each winding forms a ring which is closed since it is attached to the adjacent winding. Each ring is closed in the same sense that a conventional key ring formed of a helical wire is closed). As to claims 71 and 78, Fontaine shows a connector (one of the intermediate windings of the helical coil).

Claims 72-75 and 79-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontaine (5,370,683) in view of Alfidi et al. (3,868,956) as applied to claims 61, 64, 65, 68-71 and 76-78 above, and further in view of Martin et al. (5,397,355). Fontaine fails to disclose the claimed taper. However, it is well known in this art to provide a taper the exterior surface of stents. For example, Martin et al. teach that the outer diameter of a stent

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should have a taper (at 18) in order to anchor the stent within the blood vessel and also facilitate smooth passage within a blood vessel when barbs 18 are unexpanded. It would have been obvious to include a taper in the Fontaine stent (i.e. barbs which form a taper in the stent) so that it too would have this advantage.

Claims 61, 64, 65, 68-71 and 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein (5,593,442) in view of Alfidi et al. (3,868,956). The Klein stent is formed from a single open ended tube (col. 6, lines 10-17). Klein shows the cross-section of the struts as rectangular rather than oval. However, Alfidi et al. teach that the cross-section of stent struts may be oval (figure 13D) rather than rectangular (figure 13B). The rounded oval shape has the self evident advantage over the rectangular shape of reducing the chance of damaging the blood vessel since there are no sharp edges to so damage it. It would have been obvious to make the cross-section of the Klein struts oval rather than rectangular so that it too would have this advantage. As to claims 71 and 78, Klein shows connectors (e.g. 50 or 52).

Claims 72-75 and 79-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein (5,593,442) in view of Alfidi et al. (3,868,956) as applied to claims 61, 64, 65, 68-71 and 76-78 above,

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and further in view of Martin et al. (5,397,355). Klein fails to disclose the claimed taper. However, it is well known in this art to provide a taper the exterior surface of stents. For example, Martin et al. teach that the outer diameter of a stent should have a taper (at 18) in order to anchor the stent within the blood vessel and also facilitate smooth passage within a blood vessel when barbs 18 are unexpanded. It would have been obvious to include a taper in the Klein stent (i.e. barbs which form a taper in the stent) so that it too would have this advantage.

Applicant's arguments filed September 11, 2003 have been fully considered but they are not persuasive. The allegation on page 4 of the response that Fontaine does not suggest that the interconnections be of the same material as the struts is unfounded. Fontaine, in the embodiment in which the connecting portions of the filament are formed from a single piece of material as described in col. 6, lines 22-27, teaches that the interconnections between the struts can be of the same material as the struts. Applicant alleges on page 5 of the response that there is no teaching in the combination of Klein and Alfidi as to how to shape the struts in a stent such as Klein stent so that the struts will be oval. This allegation is unfounded since Klein teaches that the struts may be formed by laser cutting, electromachining

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and/or chemical etching of solid tubular starting materials (page 6, lines 10-17) while Alfidi teaches that the final shape of the struts may be oval in cross-section.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Thaler whose telephone number is (703) 308-2981. The examiner can normally be reached Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Milano can be

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reached on (703)308-2496. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3590 for regular communications and (703)305-3590 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0858.

mht  
October 1, 2003



MICHAEL THALER  
PRIMARY EXAMINER  
ART UNIT 3731